

In the Claims:

1. (cancelled)

2. (cancelled)

3. (cancelled)

4. (cancelled)

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17. (cancelled)

18. (cancelled)

19. (cancelled)

20. (cancelled)

21. (cancelled)

22. (cancelled)

23. (currently amended) A method for producing a ~~non-human animal~~ model of a neurodegenerative disease which comprises somatically transferring a viral vector comprising a gene encoding an aberrant form of a tau protein into brain tissue of a living ~~rodent~~ rat or mouse under conditions which result in the expression of said gene; wherein expression of said gene results in a neuropathology in said living ~~rodent~~ rat or mouse corresponding to said neurodegenerative disease.

24. (previously presented) The method of claim 23 wherein said neurodegenerative disease is selected from the group consisting of Alzheimer's Disease, Parkinson's Disease, and Huntington's Disease.

25. (currently amended) The method of claim 23 wherein said aberrant tau protein is comprises the P301L mutation associated with "fronto-temporal dementia with Parkinson's linked to chromosome 17 (FTDP-17)".

26. (previously presented) The method of claim 23 wherein said neuropathology is characterized as neurofibrillary tangles.

27. (currently amended) The method of claim 23, wherein said somatically transferring comprises injecting said gene into pre-selected areas of the brain of said living ~~rodent~~ rat or mouse.

28. (previously presented) The method of claim 23, wherein said brain tissue comprises nigrostriatal neurons, septalhippocampal neurons, or both.

29. (cancelled)

30. (currently amended) A method for inducing behavioral changes in a living ~~rodent rat or mouse~~ which comprises somatically transferring a gene encoding an aberrant form of tau protein directly into the brain of said living ~~rodent rat or mouse~~.

31. (currently amended) The method of claim 30 wherein somatically transferring comprises injecting an effective amount of gene expression construct encoding tau into the brain of said living ~~rodent rat or mouse~~.

32. (previously presented) The method of claim 30 wherein somatically transferring comprises injecting an effective amount of gene expression construct encoding tau, alpha-synuclein, presenilin-1, amyloid precursor protein, and IL6.

33. (previously presented) The method of claim 30, wherein somatically transferring is achieved by using an adeno-associated viral vector.

34. (currently amended) A composition comprising at least one gene construct adapted for producing a ~~non-human animal~~ model of a human or non-human-animal neurodegenerative disease by transferring at least one aberrant form of at least one gene known to be associated with said disease in humans or non-human animals into brain tissue of a living ~~rodent rat or mouse~~ under conditions which result in the expression of said at least one gene, wherein said transferring does not require the modification of the germ-line of said living ~~animal rat or mouse~~, where said composition comprises a gene encoding an aberrant tau protein in a vector construct which results in active expression of said gene upon introduction into said tissue, and ~~wherein said living animal is a rat or mouse.~~

35. (currently amended) The composition of claim 34 wherein said aberrant tau protein is comprises the P301L mutation associated with “fronto-temporal dementia with Parkinson’s linked to chromosome 17 (FTDP-17)”.
36. (cancelled)
37. (cancelled)
38. (cancelled)
39. (new) A method for producing a model of a neurodegenerative disease which comprises somatically transferring a viral vector comprising a gene encoding an aberrant form of a tau protein into brain tissue of a living rat or mouse under conditions which result in the expression of said gene; wherein said aberrant tau protein comprises the P301L mutation associated with “fronto-temporal dementia with Parkinson’s linked to chromosome 17 (FTDP-17)”, and wherein expression of said gene results in a neuropathology in said living rat or mouse corresponding to said neurodegenerative disease.
40. (new) A method for inducing behavioral changes in a living rat or mouse which comprises somatically transferring a gene encoding an aberrant form of tau protein directly into the brain of said living rat or mouse; wherein said aberrant tau protein comprises the P301L mutation associated with “fronto-temporal dementia with Parkinson’s linked to chromosome 17 (FTDP-17)”.
41. (new) A viral vector adapted for in vivo expression in a mouse or rat brain tissue, said vector comprising a gene encoding an aberrant form of human tau comprising the P301L mutation.